

Remarks/Arguments

Claims 1 – 17, 20, and 23 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks. Claims 24 – 28 are newly presented. Claims 18, 19, 21, and 22 have by this Response and Amendment been cancelled without prejudice or disclaimer to the subject matter contained therein. Claim 23 has been amended to correct a typographical error, and the erroneous presentation of Claims 8 and 12 as multiple dependent claims in the previous Response has been corrected.

In the outstanding Office Action, the Examiner: rejected claims 1, 2, 4, 6, 8 – 15 and 21 – 23 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,143,820 to Bright Sr. (hereinafter referred to as “Bright Sr.”); further rejected claim 6 under 35 U.S.C. 103(a) as being unpatentable over Bright Sr. in view of U.S. Patent No. 5,111,995 to Dumitrascu et al. (hereinafter referred to as “Dumitrascu”); further rejected claims 9 and 11 under 35 U.S.C. 103(a) as being unpatentable over Bright Sr. and Dumatrascu as applied to claim 8 and further in view of U.S. Patent No. 4,226,368 to Hunter (hereinafter referred to as “Hunter”); and, indicated that claims 3, 5, 7, and 16 – 20 would be allowable if rewritten in independent form.

By this Response and Amendment, the rejections under 35 U.S.C. 103 are traversed.

It is respectfully submitted that the above amendments do not introduce any new matter to this application within the meaning of 35 U.S.C. 132. Support for the newly presented claims may be found in the original description and drawings. In addition, Claim 28 is supported by the US 3,981,452 (including, *inter alia*, the specification and claim 2 therein), which was incorporated by reference into the present application at the time of filing, as indicated on page 6, line 19 of the original specification.

REJECTIONS UNDER 35 U.S.C. 103(a)

The Examiner rejected claims 1, 2, 4, 6, 8 – 15 and 21 – 23 under 35 U.S.C. 103(a) as being unpatentable over Bright Sr.; further rejected claim 6 under 35 U.S.C. 103(a) as being unpatentable over Bright Sr. in view of Dumitrascu; and further rejected claims 9 and 11 under 35 U.S.C. 103(a) as being unpatentable over Bright Sr. and Dumatrascu as applied to claim 8 and further in view of Hunter.

RESPONSE

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Applicant submits that all of the features of the presently claimed invention are not disclosed, taught or suggested in the cited prior art.

Independent claim 1 is directed toward an extruded pipe having a “first end...connectable to a pressurized fluid source” and a “second end.” The pipe comprises a “drip-irrigation *plug* emitter mounted *integrally therein*,” which has “an inlet in fluid communication with the first end of the pipe” and an “outlet in fluid communication with the second end of the pipe.” The emitter comprises a “flow-restricting *path*” between the inlet and the drip outlet, and is mounted such that the emitter “plug[s] the pipe with respect to any fluid flow except for flow through the flow-restricting path.” (Present Application, Claim 1, Emphasis Added). In this design, any water flowing from the pressurized fluid source via the first end to the second end must flow through the emitter, thereby capping the fluid pressure, for all of the fluid, across the emitter.

Bright Sr. discloses a pressure regulating emitter 12 for a drip irrigation pipe 10 externally mounted into an aperture in the wall of the pipe, so that its one portion is left outside the pipe and its other portion is located inside the pipe. The latter portion comprises the emitter's inlet and the former portion comprises the emitter's outlet. The emitter is provided with a resilient strip 16 responsive to interior water pressure changes. The pipe's aperture in which the emitter is mounted may be either preformed during the extrusion of the pipe, or formed on an as-needed basis during installation of the emitter or in the field (col. 5, lines 25 to 29). The emitter "is then simply inserted in the aperture" (col. 5, lines 31 to 32). The emitter is further provided with a spring clip 18 to secure it to the outside of the pipe. When the emitter is mounted in the pipe, it occupies only a small fraction of the pipe's cross-section as seen in Fig. 1, allowing a water flow (marked with an arrow, and as follows from the explanations in col. 4, lines 4 to 6). The Examiner claims that Bright Sr. discloses a process of extruding the pipe and installing such emitters onto the extruded pipe, stating that it would have been obvious to one having ordinary skill in the art at the time of the invention to mount the emitter to the pipe during the extrusion process and thereby reach the invention as claims in independent Claim 1.

Applicant submits that Bright Sr. does not render the present application obvious, as Bright Sr. does not disclose, teach, or suggest a "plug emitter," or an emitter which plugs the pipe with respect to any fluid flow except for the flow through the flow-restricting path (that is, between the inlet and the drip outlet). Contrary to the Examiner's statements, it is clear that the emitter of Bright Sr. is *not* a plug emitter, and, as clearly seen in Fig. 1 of Bright Sr., *it does not plug the pipe* with respect to any fluid flow except for the flow through the flow-restricting path, as claimed. In fact, Bright Sr. specifically states that his emitter is of a height much smaller than the pipe's diameter. Bright Sr. particularly states that for a half-

inch pipe, the emitter's height may be "less than quarter-inch in height" (see col. 4, lines 4-6). Such an emitter, if installed as described by Bright Sr., will in no way plug the pipe with respect to any fluid flow there through, contrary to Claim 1 of the present application.

Further, Bright Sr. does not render the present application obvious, as it fails to disclose, teach, or suggest an emitter "mounted integrally" *in* an irrigation pipe. The emitter of Bright Sr. is not integral with the irrigation pipe, as claimed in Claim 1 of the present application, but rather may be inserted or removed from its location on the irrigation pipe by a seating tool (column 5, lines 36-38), may be threaded into the pipe (column 7, lines 23-27) and may be easily replaced (column 8, lines 38-41). In addition, it can be seen, for example in Figs. 1 and 7 of Bright Sr., that the emitter is clearly mounted *on* the pipe, and not *in* the pipe, as claimed (a "drip-irrigation *plug* emitter mounted *integrally therein*," Present Application, Claim 1, emphasis added). Moreover, the emitter according to Bright Sr. has such structural elements which would not allow it to be mounted inside a pipe such that it would perform the claimed function, and in fact a spring clip 18 is provided to secure the emitter to the *outside* of the pipe. In this connection it should be noted that mounting the emitters in the pipe has the advantage, *inter alia*, that in the event of an elevated pressure within the pipe, the emitter still plugs the pipe with respect to any fluid flow except for the flow through the flow-restricting path. However, with the emitter as disclosed by Bright Sr., in the event of elevated internal pipe pressure, the receiving aperture into which the emitter has been inserted may swell, providing gaps between the wall of the pipe and the emitter through which fluid may flow.

Further still, Bright Sr. does not render the present application obvious, as it fails to disclose, teach, or suggest "an inlet in fluid communication with the first end of the pipe, a

drip outlet in fluid communication with the second end of the pipe, and a flow-restricting path [between the inlet and the drip outlet.]]” (Present Application, Claim 1) The emitter disclosed by Bright Sr. does comprises an inlet and a drip outlet, as nearly all drip emitters do. However, the resilient strip 16, being indeed flow resistant, is clearly not a *path*. Moreover, the outlet of the emitter of Bright Sr. is clearly *not* in fluid communication with a second end of his pipe, contrary to Claim 1 of the present application.

For all of the above reasons, applicant respectfully submits that Bright Sr. fails to teach each of the claimed features, and that, as such, the Examiner has failed to make a *prima facie* case of obviousness.

Further, Applicant submits that Dumitrascu fails to cure the deficiencies of Bright Sr. Dumitrascu is drawn to a drip irrigation tube formed from an elongated web, and comprising discrete emitter elements disposed at spaced intervals along the web. (Dumitrascu, Abstract).

Dumitrascu fails to disclose, teach, or suggest a pipe comprising a “drip-irrigation plug emitter mounted integrally” which has “an inlet in fluid communication with the first end of the pipe” and an “outlet in fluid communication with the second end of the pipe.” Dumitrascu also fails to disclose, teach, or suggest a “flow-restricting path” between the inlet and the drip outlet, which is mounted such that the emitter “plug[s] the pipe with respect to any fluid flow except for flow through the flow-restricting path.” (Present Application, Claim 1). Accordingly, Applicants submit that the combination of Bright Sr. and Dumitrascu fails to disclose, teach, or suggest all of the features of independent Claim 1, and of claim 6 dependent therefrom, and thus that the Examiner has failed to make a *prima facie* case of obviousness.

Further still, Applicant submits that Hunter fails to cure the deficiencies of Bright Sr. Hunter is drawn to a sprinkler head for use in a drip irrigation system, in which pressure dropping chambers

comprise a plurality of series interconnected vortices disposed within stacked plates. (Hunter, Abstract)

Hunter fails to disclose, teach, or suggest a pipe comprising a “drip-irrigation plug emitter mounted integrally” which has “an inlet in fluid communication with the first end of the pipe” and an “outlet in fluid communication with the second end of the pipe.” Hunter also fails to disclose, teach, or suggest a “flow-restricting path” between the inlet and the drip outlet, which is mounted such that the emitter “plug[s] the pipe with respect to any fluid flow except for flow through the flow-restricting path.” (Present Application, Claim 1). Accordingly, Applicants submit that the combination of Bright Sr. and Hunter fails to disclose, teach, or suggest all of the features of independent Claim 1, and of claims 9 and 11 dependent therefrom, and thus that the Examiner has failed to make a *prima facie* case of obviousness.

In addition, the Examiner’s rejections of claim 23 is also traversed. Applicant submits that Claim 23 of the present application is not rendered obvious by Bright Sr. for at least the same reasons given above, and that, as Bright Sr. fails to teach each of the claimed features, the Examiner has failed to make a *prima facie* case of obviousness. Applicant requests that the Examiner reconsider and withdraw the rejections to independent claim 1; claims 2, 4, 6, and 8 – 15 dependent therefrom; and, independent claim 23. Applicant submits that the rejections of claims 21 and 22 have been obviated by their cancellation, which is made without prejudice or disclaimer to the subject matter therein.

Applicant notes that claim 23 has been amended to correct a typographical error.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges with appreciation the Examiner’s indication that claims 3, 5, 7, and

16 – 20 would be allowable if rewritten in independent form.

All of the above claims depend directly or indirectly from claim 1, which applicant submits is now in condition for allowance. Accordingly, Applicant requests that the Examiner withdraw all objections to claims 3, 5, 7 – 14, 16, 17, and 20. Applicant submits that the objection to claims 18 and 19 has been obviated by their cancellation, which has been made without prejudice or disclaimer to the subject matter contained therein.

Further, Applicant has by this Response and Amendment corrected the erroneous presentation of claims 8 and 12 as multiple dependent claims (that is, as provided before preliminary amendment). Applicant submits that claims 8 and 12 are now presented in their proper form as depending exclusively from claim 1, and that as such, these claims are also in condition for allowance.

NEWLY PRESENTED CLAIMS

Although applicant sustains that the present application is patentable over the prior art for at least the reasons given above, by this Response and Amendment, Applicant further presents claims 24 – 28 for a first review.

Independent Claim 24 indicates that the inlet of the pipe is upstream the inlet of the emitter and the outlet of the pipe is downstream the drip outlet of the emitter. Independent Claim 25 indicates that the emitter unit is fully surrounded by the pipe. Claim 26 is dependent from Claim 24, and indicates that the flow-restricting path extends between the inlet and the drip outlet of the emitter. Claim 27 depends from Claim 26, and indicates that the flow restricting path is in the form of a labyrinth. Claim 28 depends from claim 12, which applicant submits is now in condition for allowance, and indicates that the plug emitters are inserted into the pipe so as to be tightly

surrounded thereby.

Applicant submits that none of the above features are present in Bright Sr. Accordingly, allowance of these claims is respectfully requested.

Included with this Response are fees associated with the addition of independent claim 23 (last response), independent claims 24 and 25 (this response), and dependent claims 26 – 28, which together with the cancellations presented in the foregoing amendment bring the number of pending independent claims to 4, and the total number of pending claims to 24.

CONCLUSION

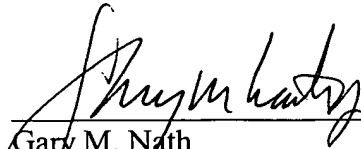
In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,
NATH & ASSOCIATES PLLC

Date: June 9, 2006
NATH & ASSOCIATES PLLC
112 South West Street
Alexandria, VA 22314
(703) 548-6284

By:



Gary M. Nath
Registration No. 26,965
Gregory B. Kang
Registration No. 45,273
Customer No. 20529